

Appl. No. 09/806,650  
Reply to Office Action of May 30, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

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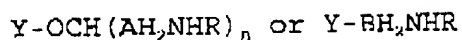
SEP 30 2003

Listing of Claims:

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1. (Previously Presented) An antibacterial agent having a chemical structure comprising a sulfated polysaccharide or an oligosaccharide prepared by partial decomposition of said sulfated polysaccharide and an antibacterial substance chemically bonded to said sulfated polysaccharide or to said oligosaccharide, wherein said antibacterial substance is chemically bonded to the reduced end sugar of said sulfated polysaccharide or of said oligosaccharide.

2. (Original) An antibacterial agent according to claim 1, wherein said chemical structure is represented by either one of the following formulae:



wherein, Y represents a sulfated polysaccharide or an oligosaccharide prepared by partial decomposition of the sulfated polysaccharide; A represents carbon derived from aldehyde group occurring through the reduction of the reduced end sugar of Y and subsequent oxidation of the resulting product with an oxidant; B represents carbon derived from the aldehyde group at the reduced

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end sugar of Y; R represents an antibacterial substance with a primary amino group or with an amino group introduced therein or represents an antibacterial substance derivative prepared by bonding an antibacterial substance through a spacer to the carbon A or the carbon B; and  $n = 1$  or 2.

3. (Original) An antibacterial agent according to claim 1, wherein said sulfated polysaccharide or said oligosaccharide prepared by partial decomposition of said sulfated polysaccharide is selected from the group consisting of fucoidan, oligofucose prepared by partial decomposition of fucoidan, carrageenan and carrabiose prepared by partial decomposition of carrageenan.

4. (Previously Presented) An antibacterial agent for use against *Helicobacter pylori*, comprising an antibacterial agent according to claim 1 as an effective component together with a pharmaceutically acceptable carrier or excipient.

5. (Currently Amended) A prophylactic and therapeutic agent ~~[[of]]~~ for gastric ulcer, comprising an antibacterial agent according to claim 1 as an effective component together with a ~~pharmaceutically~~ pharmaceutically acceptable carrier or excipient.

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6. (Withdrawn) A method for producing an antibacterial agent as set forth in claim 1, comprising the steps of:

opening the ring of the aldehyde group of the sugar residue remaining at the reduced end of the sulfated polysaccharide or of the oligosaccharide prepared by partial decomposition of the sulfated polysaccharide, directly or through oxidative decomposition, to recover an oligosaccharide fraction;

allowing the amine group of an antibacterial substance corresponding to the ring-opened aldehyde group to react with said oligosaccharide fraction to prepare a Schiff base; and reducing the resulting Schiff base.

7. (Previously Presented) An antibacterial agent according to claim 2, wherein said sulfated polysaccharide or said oligosaccharide prepared by partial decomposition of said sulfated polysaccharide is selected from the group consisting of fucoidan, oligofucose prepared by partial decomposition of fucoidan, carrageenan and carrabiose prepared by partial decomposition of carrageenan.